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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/527,641	03/14/2005	Edwin Nun	266371US0PCT	7110
22850 7590 03/22/2007 OBLON, SPIVAK, MCCLELLAND, MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER HAILEY, PATRICIA L	
			ART UNIT 1755	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			NOTIFICATION DATE	DELIVERY MODE
3 MONTHS			03/22/2007	ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/22/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com  
oblonpat@oblon.com  
jgardner@oblon.com

<b>Office Action Summary</b>	Application No. 10/527,641	Applicant(s) NUN ET AL.	
	Examiner Patricia L. Hailey	Art Unit 1755	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 13 December 2006.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-13,15-21 and 23-29 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13,15-21 and 23-29 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Applicants' remarks and amendments, filed on December 13, 2007, have been carefully considered. Claims 14 and 22 have been canceled; claims 26-29 have been added.

Claims 1-13, 15-21, and 23-29 are now pending in this application.

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Applicants' Priority Document or Documents was or were filed on March 14, 2005.

### ***Withdrawn Rejections***

The rejection of claims 13-25 under 35 U.S.C. 101 and 35 U.S.C. 112(2) stated in the previous Office Action has been withdrawn in view of Applicants' amendments.

The following rejections are maintained, in view of Applicants' amendments to claims 1 and 8, and in view of newly added claims 26-29.

### ***Claim Rejections - 35 USC § 102***

2. ***Claims 1-13, 16-21, 24, and 25 stand, and new claims 26-29 are, rejected under 35 U.S.C. 102(b) as being anticipated by Julian et al. (U. S. Patent No. 5,500,216).***

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Julian et al. disclose a uniform suspension of a composition formed by a mixture of 2 hydrophobic metal oxides (known to have been used in coating formulations to coat paper, textiles, wood, concrete, and plastic surfaces; see col. 1, lines 61-67; considered to read upon **claims 16, 17, 24, and 25**) in a vaporizable liquid carrier such as ethanol. See the Abstract of Julian et al.

The composition is a uniform suspension of, for example, hydrophobicized silicon dioxide particles in a pharmacologically acceptable fluid carrier, such as an alcohol. See col. 2, lines 1-7 of Julian et al., as well as col. 2, lines 21-30, which discloses that, upon application of the composition to skin, the carrier evaporates from body heat (this disclosure is considered to read upon **claims 6, 9, 13, and 21**).

The composition contains from 2-20% by weight of hydrophobic metal oxide particles dispersed in the fluid carrier. See col. 2, lines 52-57 of Julian et al., which also discloses that the fluid carrier can be water (considered to read upon **claims 5-8, 10, 12, 18, and 20**).

In addition to the hydrophobic silicas employed, other hydrophobic metallic oxides such as alumina, titanias, and zirconias may be employed—with or without silica—in preparing Patentees' composition. See col. 3, lines 28-42 of Julian et al., which also discloses (1) the employment of hydrophobic pyrogenic silicas, as well as (2) the employment of "basic oxide particles...produced pyrogenically or otherwise, e.g., by wet precipitation techniques", and (3) that the hydrophobic oxides can exhibit "an average equivalent spherical diameter of less than about 100 millimicrons, typically from 1 to 20 millimicrons..."

This disclosure is considered to read upon **claims 1-4**. Because Julian et al. disclose a diameter within the range now present in Applicants' claims, the remaining limitations regarding the "irregular fine structure" is considered inherently encompassed by Julian et al.

Because Julian et al. disclose a suspension reading upon that instantly claimed, it would necessarily follow that Patentees' suspension would exhibit a dynamic viscosity such as that recited in **claims 11 and 19**.

With respect to new **claims 26-29**, the recitation "uniform suspension" by Julian et al., along with the teachings regarding the aforementioned components and respective amounts thereof, is considered to read upon the limitation "wherein the suspension is in the form of a paste."

In view of these teachings, Julian et al. anticipate claims 1-13, 16-21, 24, and 25-29.

**3. Claims 1-6, 8-11, 13, 16-19, 21, 24, and 25 stand, and new claims 26-29 are, rejected under 35 U.S.C. 102(e) as being anticipated by Keller et al. (U. S. Patent No. 6,689,126).**

Keller et al. disclose a coating composition comprising at least one powder whose particles have a hydrophobic surface; examples of these include aluminum oxide, titanium dioxide, and silicon dioxide. See col. 6, line 60 to col. 7, line 4 of Keller et al., which also discloses pyrogenic silicon dioxide as a preference, and col. 7, lines 21-27, which further discloses that the powder particles may be prepared by "the

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methods known for the preparation of hydrophobicized pyrogenic silica.” This disclosure is considered to read upon **claims 1-4**.

The coating composition may also contain, if desired, an organic diluent or solvent; exemplary solvents include ketones, and aliphatic and aromatic hydrocarbons. See col. 7, line 62 to col. 8, line 11 of Keller et al.; this disclosure is considered to read upon **claim 6**.

In such a composition, the solids content ranges from 0.5 to 80% by weight. See col. 8, lines 12-19 of Keller et al. (considered to read upon **claims 5, 8-10, and 18**).

Because Keller et al. disclose a composition comparable to that instantly claimed, it would necessarily follow that Patentees’ suspension would exhibit a dynamic viscosity such as that recited in **claims 11 and 19**.

“In principle, all conventional surfaces may be coated with the coating compositions of the invention. Examples of the conventional surfaces are the surfaces of wood, metal, glass, and plastic. The coating compositions of the invention may of course also be used to coat rough and/or porous surfaces, such as concrete, plaster, paper, woven fabric, examples including textile woven fabric for clothing, umbrellas, tents, and marquees, and for comparable applications, and also leather and hair as well.”

See col. 8, lines 36-54 of Keller et al., as well as col. 10, lines 39-51 (which discloses that Patentees’ compositions are suitable for affording protection against soiling, in particular, surfaces which are exposed to weathering), and col. 11, lines 19-31; this disclosure is considered to read upon **claims 13, 16, 17, 21, 24, and 25**.

With respect to new **claims 26-29**, the recitation "coating composition" by Keller et al., along with the teachings regarding the aforementioned components and respective amounts thereof, is considered to read upon the limitation "wherein the suspension is in the form of a paste."

In view of these teachings, Keller et al. anticipate claims 1-6, 8-11, 13, 16-19, 21, and 24-29.

***Claim Rejections - 35 USC § 103***

***4. Claims 15 and 23 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Keller et al. (U. S. Patent No. 6,683,126) in view of Tully (U. S. Patent No. 4,102,703).***

Keller et al. is relied upon for its teachings in the above 102(e) rejection of claims 1-6, 8-11, 13, 16-19, 21, and 24-29. Although Keller et al. at col. 8, lines 45-54 disclose that application of Patentees' coating composition is "in accordance with the application techniques customary in coatings technology", and further exemplify said techniques by disclosing methods such as brushing, spraying, airbrush, dipping or rolling, "with subsequent drying of the coating, during which the solvent evaporates", this reference does not explicitly teach or suggest knife coating, as recited in claims 15 and 23.

Tully discloses water-repellent coating compositions comprising a hydrophobic particulate metal or metalloid oxide, such as silica, titania, and alumina (col. 3, lines 5-23) suspended in a water-soluble polyhydric alcohol or aqueous solution thereof (col. 5, lines 42-61), can be applied to substrates such as natural fibers, woven and non-woven

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textiles, paper, wood, etc. (col. 8, lines 49-60), via conventional coating methods such as doctor blading (also known as "knife coating"). See col. 8, line 61 to col. 9, line 5 of Tully, which also discloses some of the same customary techniques as Keller et al. at col. 8, lines 45-54.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the teachings of Keller et al. by substituting any of the known techniques disclosed therein with doctor blading ("knife coating"), as suggested by Tully, and thereby obtain Applicants' claimed invention.

### ***Response to Arguments***

In response to Applicants' arguments that the prior art does not teach or suggest Applicants' newly added claim limitations that the hydrophobic oxidic particles exhibit an irregular fine structure, said structure comprising elevations having an aspect ratio of greater than 1.0, it is the Examiner's position that, because the cited references of record disclose oxidic particles exhibiting a particle size within that respectively claimed, the remaining claimed properties are considered inherently exhibited by the prior art, absent the showing of convincing evidence to the contrary. See, for example, the Examples of Keller et al., which employ Aerosil® R812S, and page 5, lines 23-28 of Applicants' Specification.

For these reasons, Applicants' arguments are not persuasive.



***Conclusion***

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

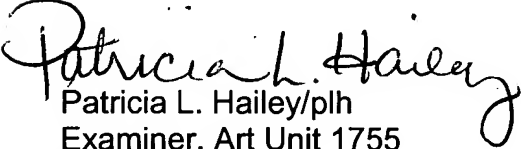
A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patricia L. Hailey whose telephone number is (571) 272-1369. The examiner can normally be reached on Mondays-Fridays, from 7:00 a.m. to 3:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

  
Patricia L. Hailey/plh  
Examiner, Art Unit 1755  
March 12, 2007

  
J. J. LORENZO  
SUPERVISORY PATENT EXAMINER